State of Alaska

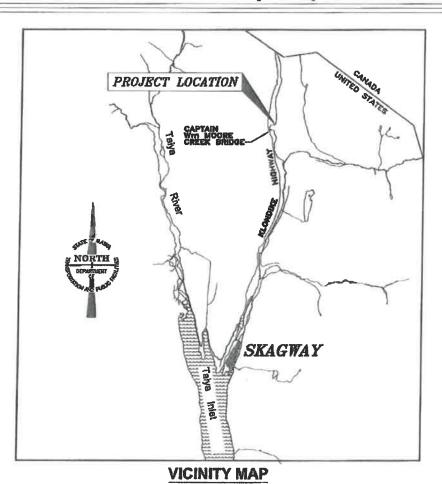
Department of Transportation and Public Facilities **Southcoast Region**



ALASKA REGION

PROJECT No. 0106(036) ~ 80665

POWER SYSTEM UPGRADE



AS BUTLINGESON

NOTES:

Travel between Skagway and Mine Mountain job-site will require U. S. Border clearance.

Use these plans in conjunction with the State of Alaska Standard Specifications for Highway Construction, 2015 edition and the project special provisions.

| | | NDEX | | | | |
|--------------|-------------|--------------------|--|--|--|--|
| SHEET NO. | DESCRIPTION | | | | | |
| A1 | TITLE SHEET | | | | | |
| B1 | SITE PLAN & | LEGEND | | | | |
| C1 | ESTIMATE OF | QUANTITIES & BASIS | | | | |
| E1-E7 | SITE PLAN & | DETAILS | | | | |
| T1 | TRAFFIC CON | ITROL | | | | |
| P1 | ESCP | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | CDS MILE POINT: 9 | | | | |

PLOT: PSPACE OR MSPACE: 1=1(F)

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES SOUTHCOAST REGION



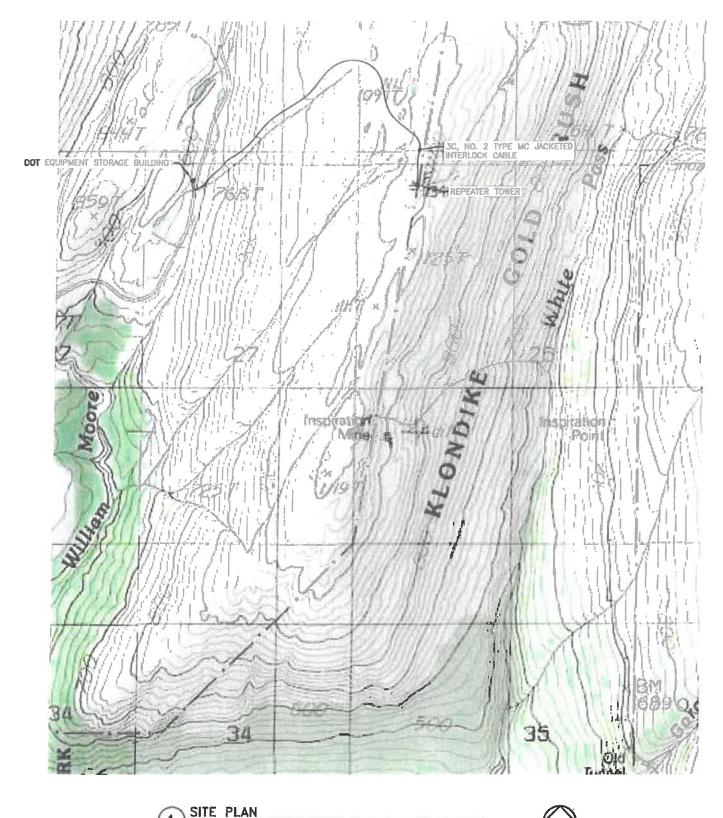
REGIONAL PRE-CONSTRUCTION ENGINEER L. PAT CARROLL, P.E.

REGIONAL DIRECTOR OF DESIGN & CONSTRUCTION DATE

CERTIFIED TRUE & CORRECT AS-BUILT OF ACTUAL FIELD

CONSTRUCTION PROJECT MANAGER

| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|--------|---------------------|------|--------------|-----------------|
| ALASKA | 0106(036)/80665 | 2015 | A1 | 12 |



LEGEND

ABBREVIATIONS:

UGE UNDERGROUND ELECTRIC

HDG HOT DIPPED GALVANIZED

PVC POLYVINYL CHLORIDE CONDUIT, SHED. 80

RSC RIGID STEEL CONDUIT

XFMR TRANSFORMER

E) EXISTING

(N) NEW

<u>LIGHTING:</u>

EXTERIOR SOFFIT MOUNTED LUMINAIRE

POWER:

DUPLEX RECEPTACLE, 18" AFF UON.

JUNCTION BOX

© CONDULET

TRANSFORMER

PANELBOARD GROUND ROD

CIRCUIT BREAKER

SWITCH OR DISCONNECT

-o`\ b---- FUSE

PROJECT NOTES

- THE CABLE ROUTE ILLUSTRATED IS APPROXIMATE. SELECT THE FINAL ROUTE TO PROVIDE THE BEST PROTECTION FOR THE CABLE.
- . AVOID CROSSING ROCK BLUFFS, STEP GULLY, AND STREAMS.
- STAKE ROUTE, SPUCE LOCATIONS, AND ANCHOR LOCATIONS BEFORE PROCEEDING WITH CABLE INSTALLATION.
- CABLE ROUTE, SPLICE LOCATIONS, AND ANCHOR LOCATIONS SHALL BE APPROVED BY THE PROJECT ENGINEER.
- PULLOUT AT 12 MILE STATION MAY BE USED FOR STAGING, COORDINATE WITH MAINTENANCE MANAGER.
- · PROJECT WORK SHALL NOT OCCUR IN THE KLONDIKE GOLD RUSH HISTORIC AREA.

STATE OF ALASKA DEPTARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

> MINE MOUNTAIN REPEATER

> > SITE PLAN & LEGEND

CHECKED BY: BCH/KHD

DRAWN BY: KHD

PROJECT DESIGNATION 0106(038)/80685

STATE YEAR SHEET
ALASKA 2015 B1 12

NO SCALE

| 662(1) ELECTRICAL POWER AND F | PHOTOVOLTAIC | SYSTEM | |
|--|----------------------|----------|--|
| POWER DISTRIBUTION | | | |
| DESCRIPTION | QUANTITY | PAY UNIT | |
| | | | |
| INVERTER/CHARGER CHASIS | 1 | EA | |
| CHARGE CONTROLLER | | EA | |
| BATTERIES (12V, 200AH) | 4 | EA | |
| BATTERY ENCLOSURE | 1 E | | |
| SOLAR PANELS (22,1V, 140W) | 3 | EA | |
| REPAIR & REDRIENTATION OF EXISTING SOLAR PANEL STRUCTURE | 1 | LS | |
| WORK LIGHT | 1 | EA | |
| TOWER SUPPORT STRUCTURES | 1 | | |
| POWER SHELTER SUPPORT STRUCTURES | 1 | ĻS | |
| 4-IN RIGID STEEL CONDUIT (SPLICE STRUCTURES) | 5 | EA | |
| ROCK ANCHOR | -10-12 | EA | |
| LITHERY POLE | - | EA | |
| MISC ITEMS | 1 | LS | |
| RACEWAYS, CONDUCTORS | AND CABLES | | |
| 3/4-in galv rigid steel conduit | 10 | LF | |
| 2-IN GALV RIGID STEEL CONDUIT | 30 | UF | |
| I-1/4-IN EMT CONDUIT | 30 | CLF | |
| 2-IN PVC CONDUIT | -300- 350 | LF | |
| TRENCHING AND BACKFILL | 300 | ŁF | |
| 2-IN CONDUIT SUPPORTS | -9 13 | EA | |
| JUNCTION BOXES | 2 1 | EA | |
| 10. 12 XHHW | 3 | CLF | |
| Ю. 10 ХННЖ | 0.2 | CLF | |
| O. 8 XHHW | 0.5 | CLF | |
| IO. 6 XHHW | 0.4 0,7 | CLF | |
| IO. 4 XHITW | 0.4 | CLF | |
| IO. 2 XHHW | 0.05 0.1 | CLF | |
| C, NO. 5 TYPE SOOW CABLE | 0,03 | MLF | |
| C, NO. 2 TYPE W CABLE | 0.01 | MLF | |
| G. NO. 2/O TYPE W CABLE | 0,02 | MLF | |
| C, NO. 4 TYPE W CABLE | 0.075 | MLF | |
| C, NO. 10 TYPE SOOW CABLE | 0.04 | MLF | |
| C, NO. 5 TYPE SOOW CABLE | 0,035 | | |
| O NO P TARRENO NAMED DE LA CONTRACTOR DE | | 4.40 P | |
| C, NO. 6 TYPE MC JACKETED | 0.1 | MLF | |

| | ESTIMATE OF QUANTIT | IE2 | | |
|---------|--|----------|----------|--|
| ITEM | DESCRIPTION | QUANTITY | PAY UNIT | |
| 640(1) | MOBILIZATION AND DEMOBILIZATION | 1 | LS | |
| 640(4) | WORKER MEALS AND LODGING, OR PER DIEM | 1 | LS | |
| 641(1) | EROSION, SEDIMENT, AND POLLUTION CONTROL, ADMINISTRATION | 1 | LS | |
| 641(3) | TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL | 1 | LS | |
| 841(5) | TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL BY DIRECTIVE | 1 | CS | |
| 641(6) | WITHHOLDING | 1 | CS | |
| 643(2) | TRAFFIC MAINTENANCE | 1 | LS | |
| 643(15) | FLAGGING | 1 | cs | |
| 643(25) | TRAFFIC CONTROL | 1 | cs | |
| 662(1) | ELECTRICAL POWER AND PHOTOVOLTAIC SYSTEM | 1 | LS | |

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

07/16 UPDATE BASIS OF ESTIMATE

State of Alaska Department of Transportation & Public Facilities Southeast Region

SGY: MINE MOUNTAIN REPEATER POWER SYSTEM UPGRADE

ESTIMATE OF QUANTITIES & BASIS OF ESTIMATE

DESIGNED BY: KHID
DRAWN BY: SEJ

PATH: P:PROJECTSK134 STATE OF ALASKA BOTPR125A NINE MOUNTAIN REPEATER MODIFIED DESIGN/DRAWN OF TAB: C1 Manday, July 28, 2016 123313 PM ROBBIE JENSEN

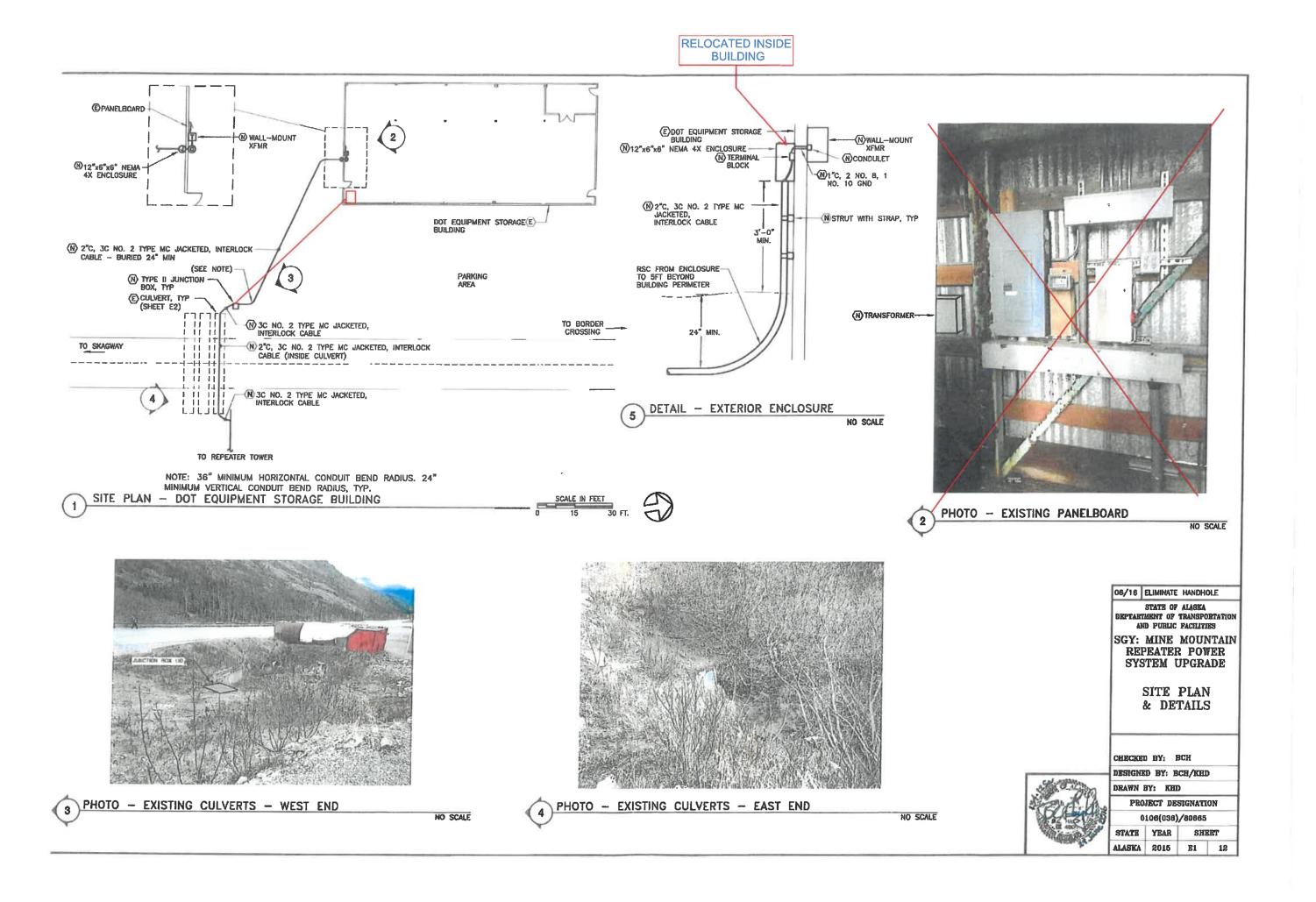
REVISIONS PROJECT DESIGNATION YEAR SHEET NO. DESCRIPTION

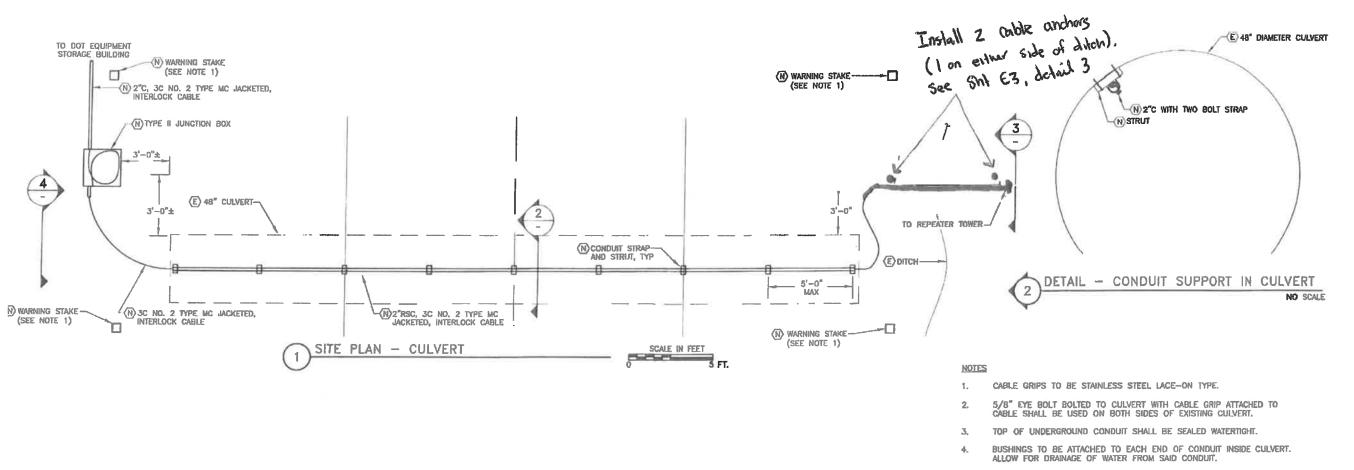
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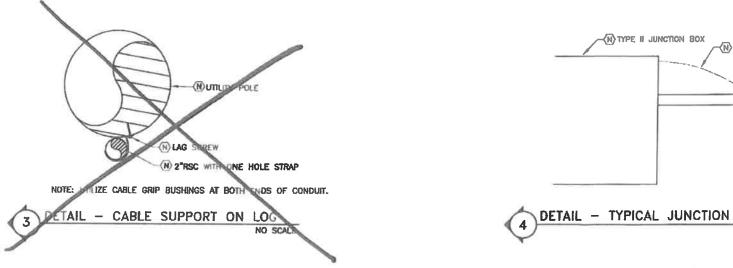
0106(036)/80665

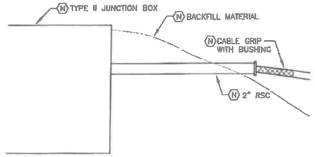
2015

C1 12









DETAIL - TYPICAL JUNCTION BOX CABLE SUPPORT

- WRAP ANTI-CHAFFING SLEEVES AROUND ELECTRICAL CABLE AT CHAFFING
- REDIRECT FLOW OF WATER AS NEEDED DURING CONSTRUCTION.
- WARNING STAKES SHALL BE REFLECTIVE TYPE, AND LABELED "CAUTION -BURIED ELEC LINE."

07/16 ELIMINATE HANDHOLE

STATE OF ALASKA DEPTAKTMENT OF TRANSPORTATION AND PUBLIC PACILITIES

SGY: MINE MOUNTAIN REPEATER POWER SYSTEM UPGRADE

> SITE PLAN & DETAILS

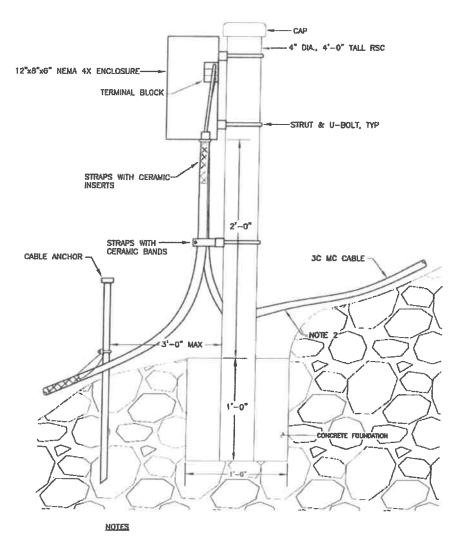
CHECKED BY: BCH

DESIGNED BY: BCH/KHD

DRAWN BY: KHD

PROJECT DESIGNATION 0106(036)/80685

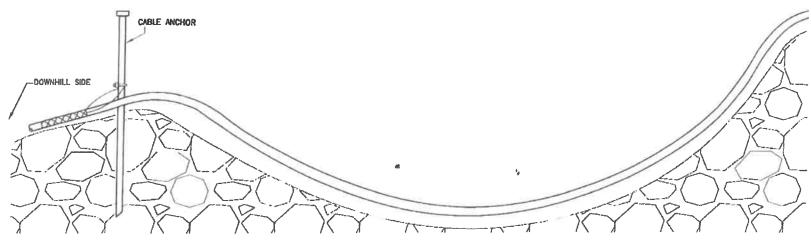
STATE YEAR SHEET ALASKA 2015 E2 12



- 1. SPLICES SHALL BE PLACED 1500 FEET APART, MINIMUM.
- 2. PROVIDE 3'-0" CABLE SLACK ABOVE SPLICE.
- 3. CABLE GRIPS SHALL BE STAINLESS STEEL LACE-ON TYPE.

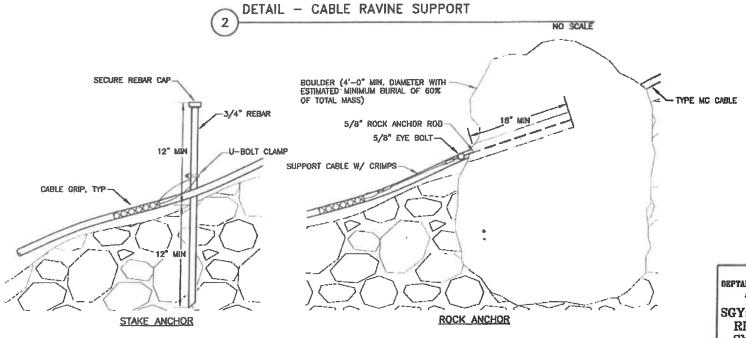
DETAIL - CABLE SPLICE BOX

NO SCALE



NOTES

- 1. CABLE ANCHOR SHALL BE PLACED AT DOWNHILL SIDE OF RAVINE AS SHOWN.
- 2. PROVIDE CABLE SLACK TO ALLOW CABLE TO LAY ON BOTTOM OF RAVINE.
- 3. CABLE GRIPS SHALL BE STAINLESS STEEL LACE-ON TYPE.



NOTES

- 1. INSTALL CABLE ANCHORS WHERE CABLE PATH CHANGES DIRECTION.
- 2. INSTALL CABLE ANCHORS NOT MORE THAN 250 FEET APART.
- 3. ANCHORS MAY BE STAKE OR ROCK ANCHOR TYPE, PROJECT ENGINEER WILL CONFIRM STABILITY OF BOULDERS FOR ROCK ANCHOR TYPES.
- 4. CABLE GRIPS TO BE STAINLESS STEEL LACE-ON TYPE.

DETAILS - MC CABLE ANCHORS

NO SCALE

STATE OF ALASKA
DEPTARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SGY: MINE MOUNTAIN REPEATER POWER SYSTEM UPGRADE

SITE PLAN & DETAILS

CHECKED BY: BCH

DESIGNED BY: BCH/KHD

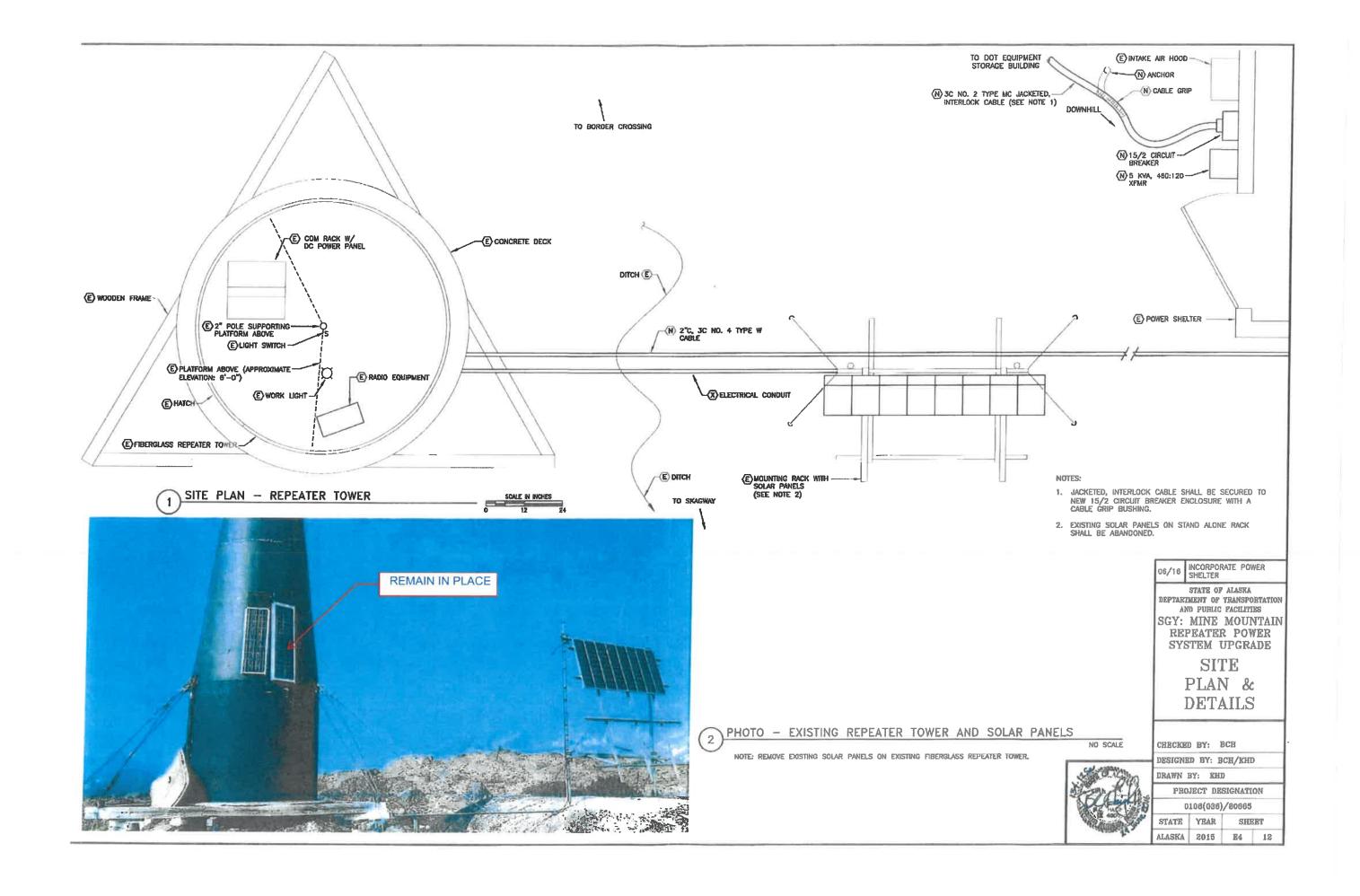
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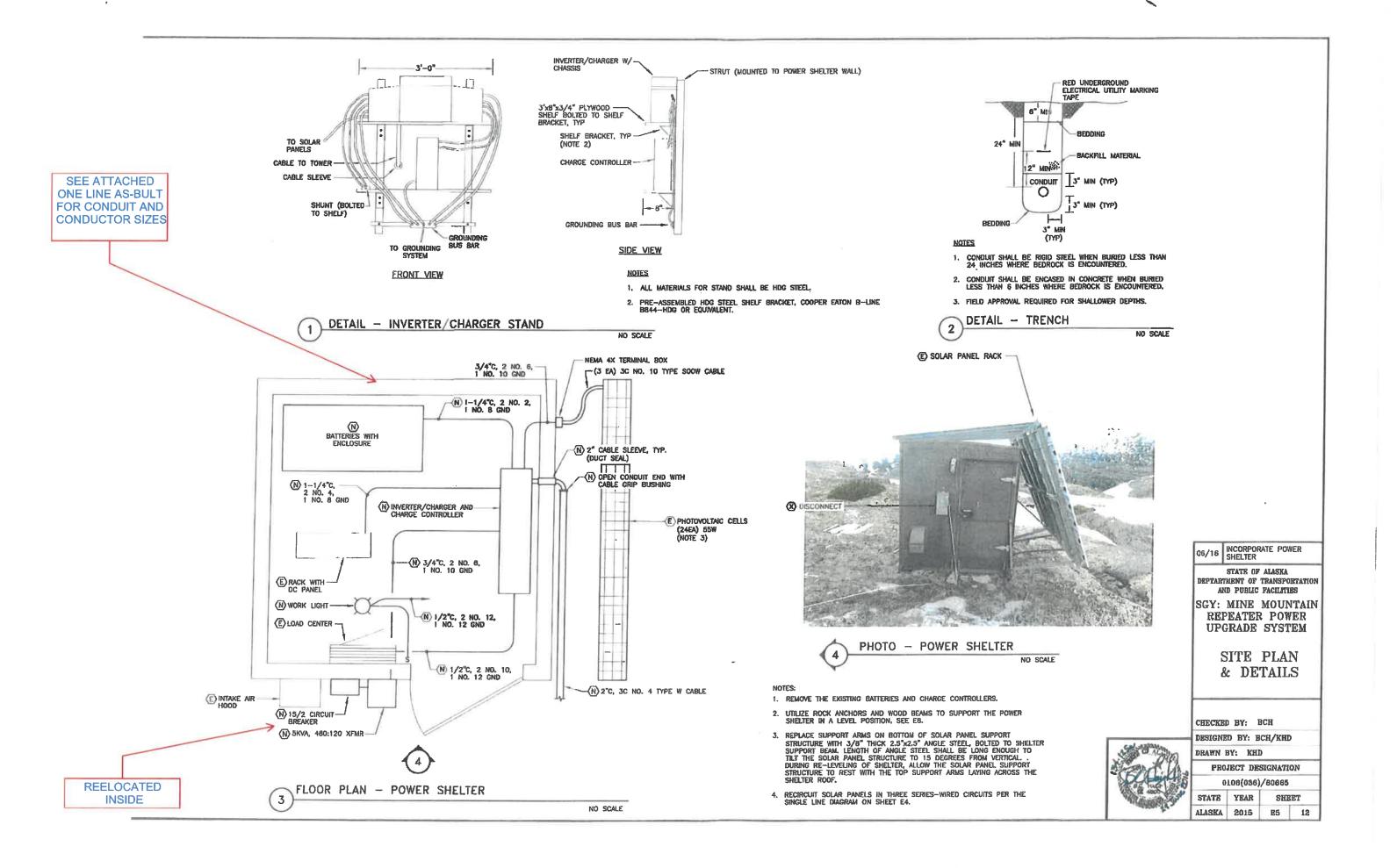
PROJECT DESIGNATION

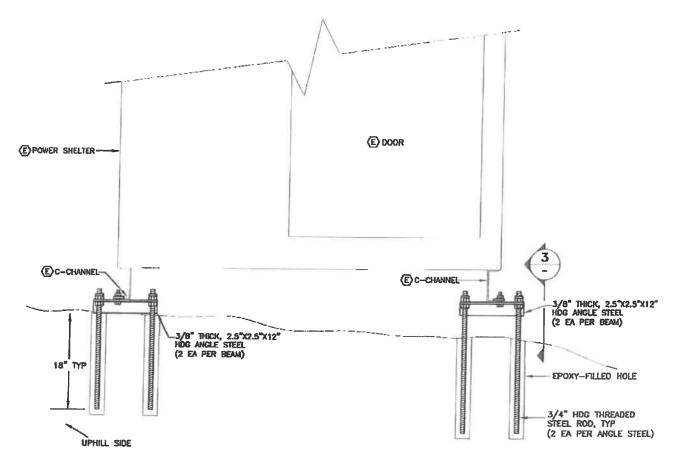
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STATE YEAR SHEET
ALASKA 2015 E3 12



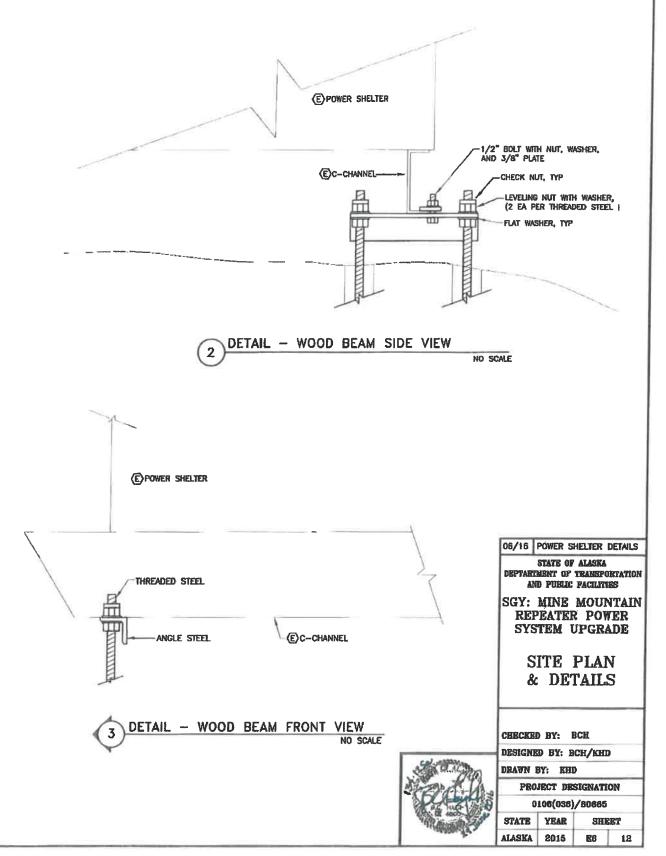


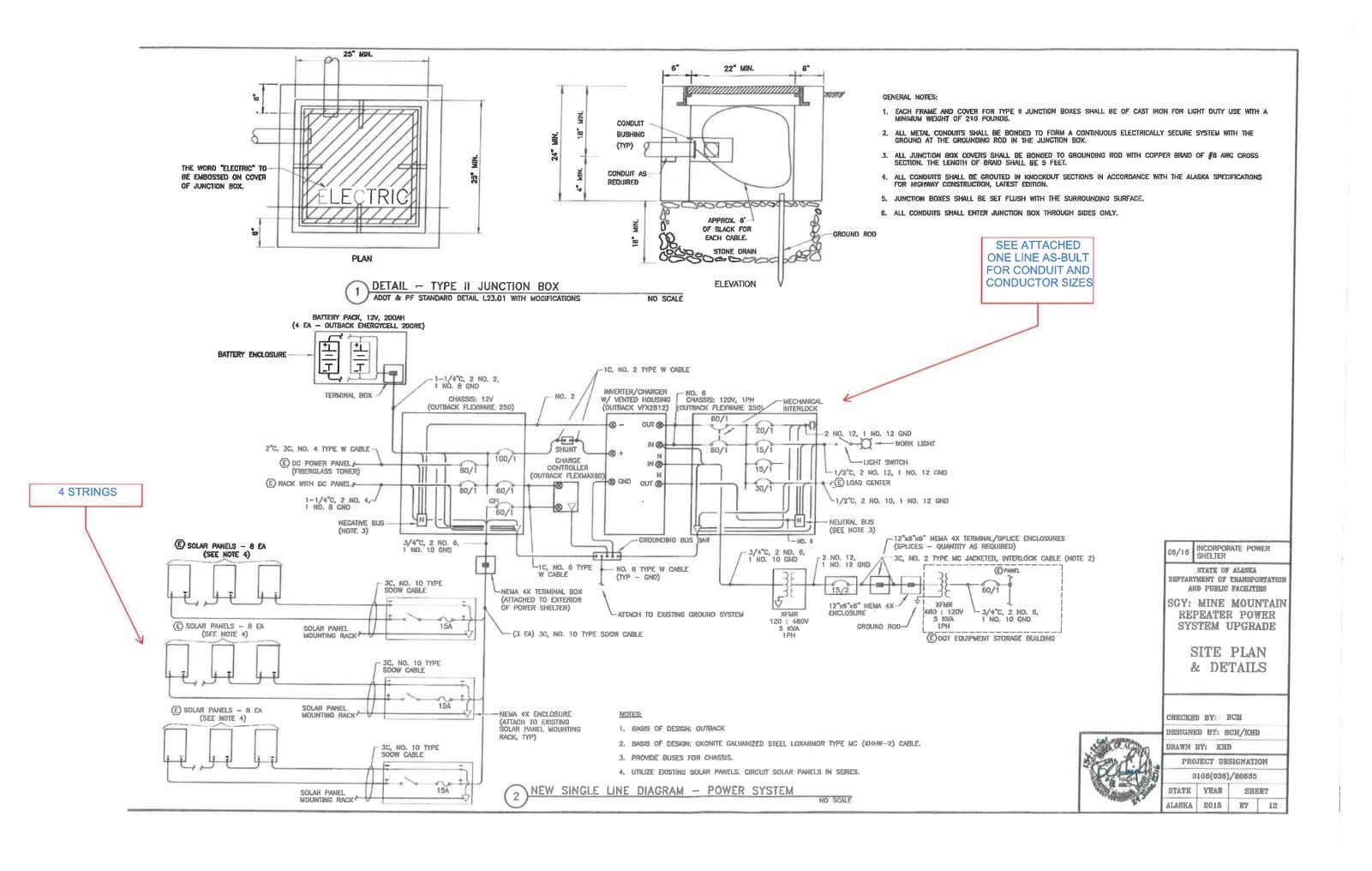


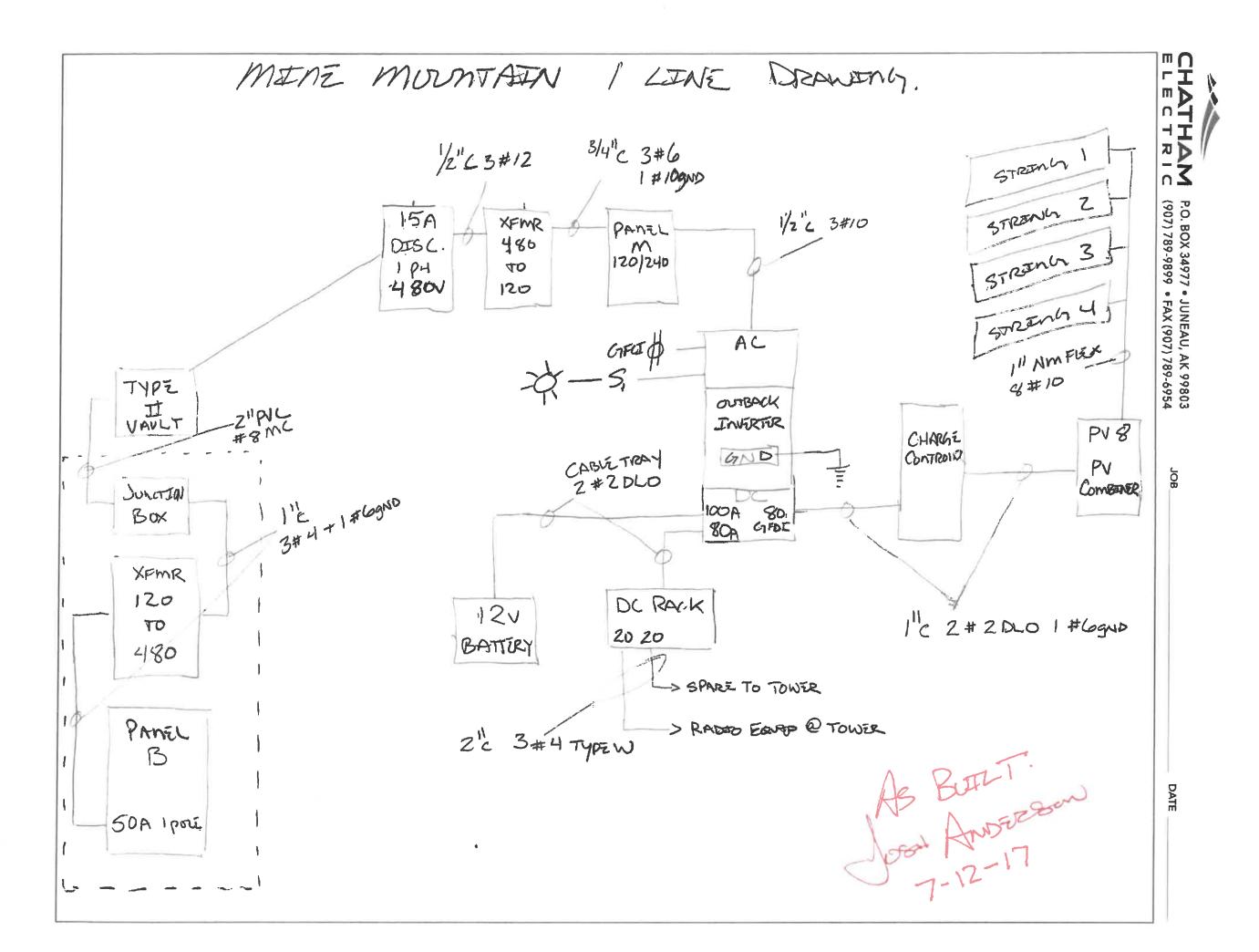


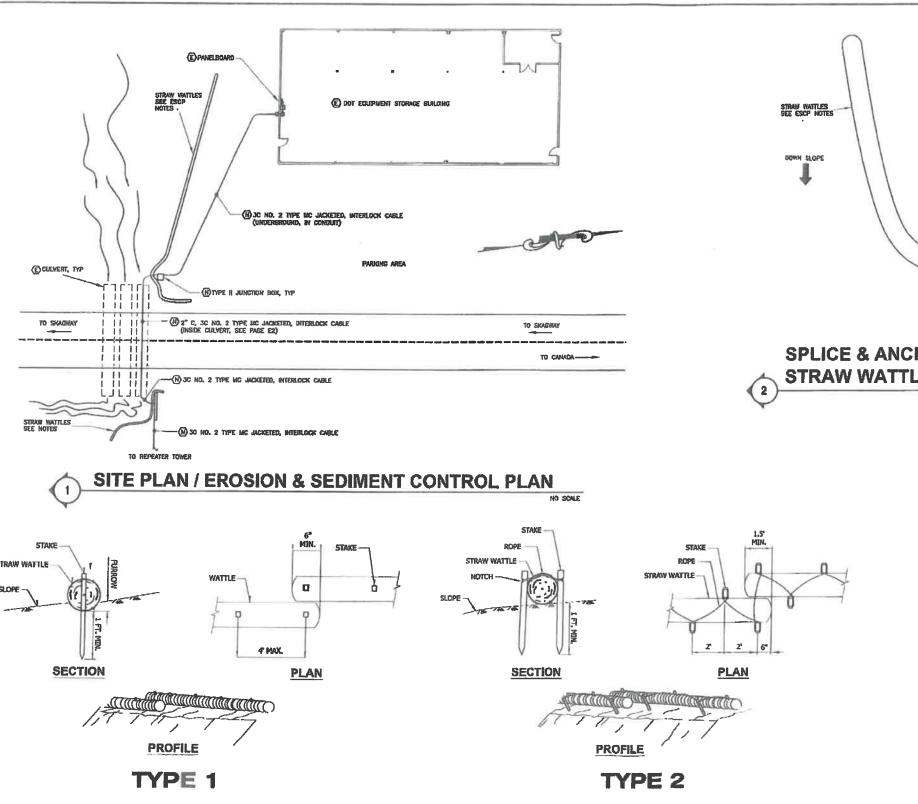
NOTE: THREADED ROD LENGTH AND LEVELING NUT POSITIONS AS REQUIRED TO LEVEL THE EXISTING SHELTER.

1 DETAIL - POWER SHELTER LEVELING
NO SCALE



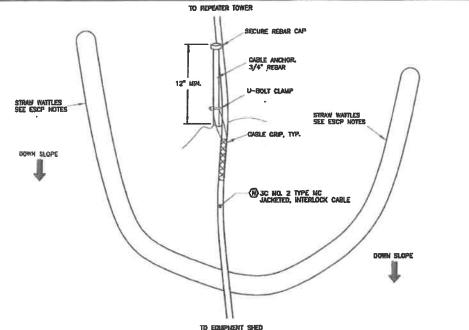






STRAW WATTLE INSTALLATION DETAIL

NO SCALE



SPLICE & ANCHOR STRAW WATTLE INSTALLATION DETAIL

NO SCALE

ESCP NOTES

- INSTALL STRAW WATTLE BEFORE BEGINNING CONSTRUCTION
 ACTIVITIES
- ACTIVITIES.

 2. EXTEND STRAW WATTLE BEYOND LOWER EDGES OF FILL OR DISTURBANCE.
- THE LOCATIONS OF TEMPORARY EROSION & SEDIMENT POLLUTION CONTROLS ARE ONLY RECOMMENDATIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PREPARE AND IMPLEMENT A WQCP ACCORDING TO SECTION 641 OF THE SPECS.
- ADDITIONAL EROSION AND SEDIMENT POLLUTION CONTROL DEVICES MAY NEED TO BE ADDED AT THE DISCRETION OF THE PROJECT ENGINEER.
- LAP ENDS OF STRAW WATTLE TO PREVENT SEDIMENT FROM SNEAKING THROUGH.
- ANCHOR STRAW WATTLE EVERY FOUR FEET OR AS NEEDED TO SECURE FIRMLY IN PLACE PROVIDING CONTINUOUS GROUND CONTACT.
 EROSION CONTROL MEASURES WILL BE EVALUATED BY THE ENGINEER
- BASED ON EFFECTIVENESS, THOSE FOUND INEFFECTIVE MUST BE REPLACED OR REPAIRED WITHIN 24 HOURS FOLLOWING NOTIFICATION.
- MAINTAIN AND MONITOR EROSION AND SEDIMENT POLLUTION CONTROL DEVICES ON A DAILY BASIS.
- REMOVE EROSION AND SEDIMENT POLLUTION CONTROL DEVICES AFTER CONSTRUCTION IS COMPLETE.





SEPARIMENT OF TRANSPORTATION

R PUBLIC FACILITIES

SOUTHEAST REGION

CV. MINIE MOTINION

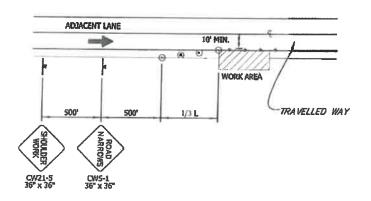
SGY: MINE MOUNTAIN REPEATER POWER SYSTEM UPGRADE

SITE PLAN/ESCP

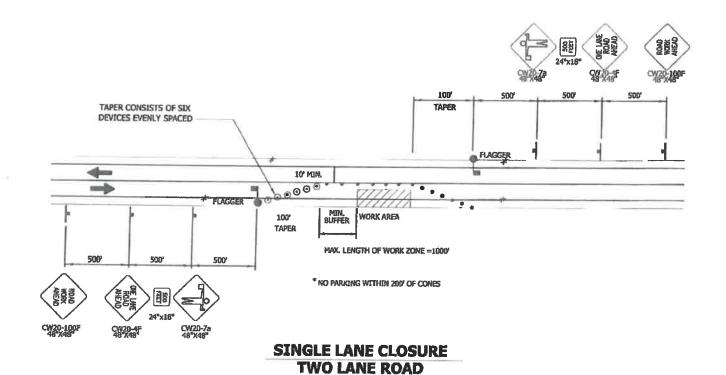
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P1 FH58y, July 01, 2016 11:8546 AM KYLE DRAPPAUX

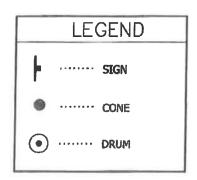
REVISIONS PROJECT DESIGNATION YEAR SHEET TOTAL NO. DATE DESIGNSTION 0106(036)/80665 2015 P1 12



SHOULDER WORK



| | | TRAFF | IC CONT | TROL PLA | N SET | UP TABI | LE | | |
|-------------|---------------------------|-------|-----------------|---------------------------|-------|----------------|----------|---------|-------------|
| | LANE WIDTH (ft) | | LANE WIDTH (ft) | | | | | | |
| | 10 | 11 | 12 | 10 | 11 | 12 | SPACE | IG (ft) | |
| SPEED (MPH) | Minimum Taper Length (ft) | | | Minimum Number of Devices | | | Straight | Curve | BUFFER (ft) |
| 40 | 270 | 285 | 320 | 5 | 9 | 9 | 40 | 80 | 305 |
| 45 | 460 | 495 | 640 | 11 | 12 | 13 | 45 | 90 | 360 |
| 50 | 500 | 550 | 600 | 11 | 12 | 13 | 50 | 100 | 425 |
| S5 | 550 | 605 | 660 | 11 | 12 | 13 | 55 | 110 | 495 |



NOTES:

- 1. MINIMUM OF ONE LANE SHALL REMAIN OPEN AT ALL TIMES IN WORK AREAS.
- 2. TEMPORARY DRIVING LANES SHALL HAVE A MINIMUM WIDTH OF 10'-0".
- THE CONTRACTOR SHALL ORGANIZE CONSTRUCTION OPERATIONS SO THE TOTAL OF ALL STOPPAGES EXPERIENCED BY A
 VEHICLE TRAVELING THROUGH THE PROJECT DOES NOT EXCEED FIVE MINUTES.
- 4. CONSTRUCTION SIGNING SHALL BE IN PLACE ONLY WHEN THE CONDITIONS EXIST FOR WHICH THE SIGNS ARE INTENDED.
- 5. CHANNELIZATION DEVICES IF USED AT NIGHT SHALL BE LIT IN ACCURDANCE WITH THE ALASKA TRAFFIC MANUAL.
- IT IS THE INTENT OF THIS TRAFFIC CONTROL PLAN (TCP) TO ILLUSTRATE SOME, NOT ALL, OF THE TRAFFIC CONTROL SETUPS
 WHICH WILL BE REQUIRED ON THIS PROJECT, ALL TCPS SHALL BE CREATED BY THE CONTRACTOR AND SUBMITTED TO THE
 ENGINEER FOR APPROVAL,

